Augustine Double Beam Freestanding Pergola with 8”x 8” Posts Installation Guide

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Before You Begin Installation

Consult your local authorities for any permits required to construct the pergola.

Check with local building code officials to review any required permits or building limitations.

Read instructions thoroughly prior to assembly.

If you have questions or concerns with this product please **DO NOT** return before consulting a product specialist. Please refer all questions and concerns to our product specialist at 1-888-743-3673.

Due to the size of the parts, at least two people are required to handle, fit and secure pergola components.

Read manual first as mounting hardware varies with each application. Do not anchor to paver bricks. Foundation must be a solid surface.

Do not stand, sit, store, or hang items on the pergola.

Repair or replace broken parts immediately. Call 1-888-743-3673 for replacement parts.

At regular intervals inspect your pergola to make sure that assembly integrity has been maintained.

The installation video can be found at:
http://www.usavinyl.com/vinyl-pergola-installation.html

Tools Required for Inatallation:

1. Extension Cord
2. Hammer Drill
3. Reciprocating Saw (optional only if you are cutting down material)
4. Power Drill
5. 1" Wing Tip Drill Bit
6. Drill Bits - 5/16", 3/16"
7. Phillips Screwdriver Bit
8. Masonry Bit - 3/8"
9. Pencil
10. String Line
11. Level
12. Tape measure (min 25')
13. 2 Ladders (for at least the height of your pergola)
14. Rubber Mallet
15. Ratchet
16. Deep Socket - 1/2"
17. Standard Socket - 9/16"
18. Carpenter's Square
19. Safety Glasses

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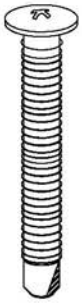
Hardware



A

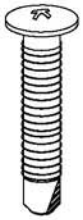
#10 x 2 1/2" Self Tapping Screw

B

3/8" x 5" Wedge Anchor (with washer and nut)

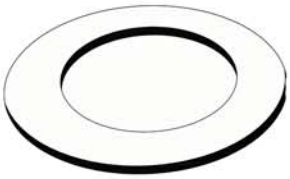
C

5/16"x 4" Lag Bolt (for connecting the 2"x8" headers to the posts)



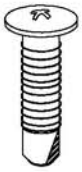
D

#10 x 1 1/2" Self Tapping Screw



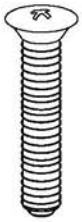
G

5/16" Flat Washer



E

#10 x 1" Self Tapping Screw



F

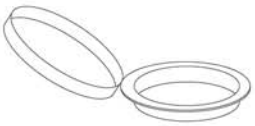
#14 x 2" SS Screw

H

1" Hole Plug

I

Glue



J

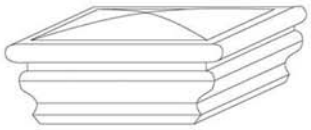
Hinged Screw Cap

*Insert screw into cap before installing

Hardware Quantities

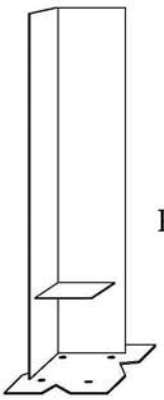
Pergola Size	A	B	C	D	E	F	G	H	I	J
12x12	311	16	16	16	116	32	16	16	1	435
14x14	392	16	16	16	128	32	16	16	1	528
16x16	494	16	16	16	140	32	16	16	1	642

Post Parts



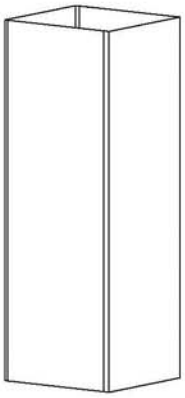
K

4” Post Cap



L

Concrete
Post Mount



M

Vinyl Sleeve
4”x4”x24”

N

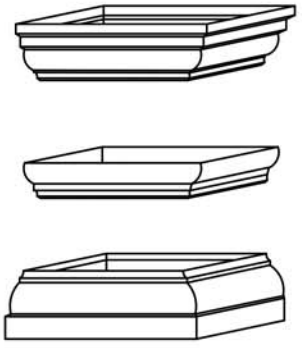
Post
Spacer

O

Vinyl Post
8”x8”

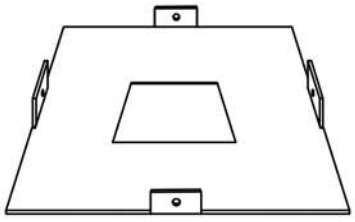
P

Wood Post
4”x4”



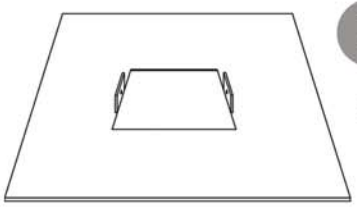
S

8” Square
Base & Collar
Kit



Q

8” Straight
Top Cap



R

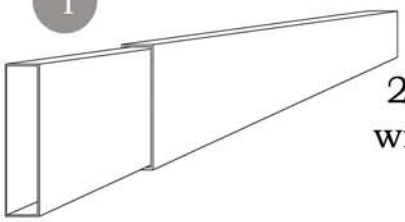
8” Interior
Adapter

Post Parts Quantity

Pergola Size	K	L	M	N	O	P	Q	R	S	
12x12	4	4	4	4	4	4	4	4	4	
14x14	4	4	4	4	4	4	4	4	4	
16x16	4	4	4	4	4	4	4	4	4	

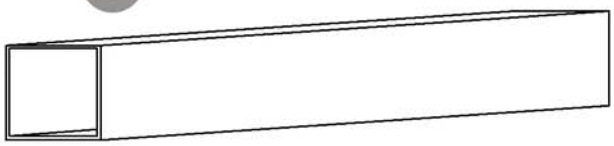
Canopy Parts

T



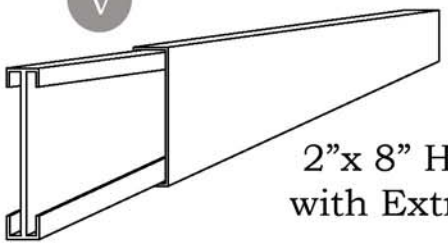
Projection Rafters
2”x 6” Hollow Vinyl Sleeve
with Extruded Alum. Insert

U



1.5”x1.5” Purlin

V

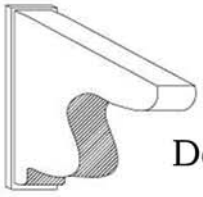


Headers
2”x 8” Hollow Vinyl Sleeve
with Extruded Alum. Insert

W

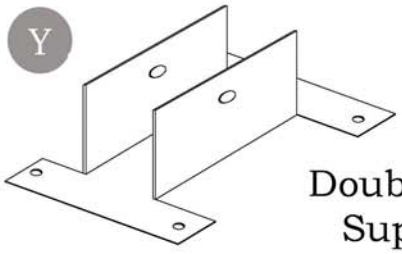
Decorative End
2”x 6”

X



Decorative End
2”x 8”

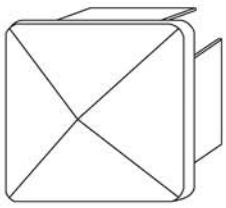
Y



Double Beam Rafter
Support Bracket

Z

Purlin Cap



Canopy Parts Quantity

Pergola Size	T	U	V	W	X	Y	Z		
12x12	9	31	4	18	8	18	62		
14x14	10	36	4	20	8	20	72		
16x16	11	42	4	22	8	22	84		

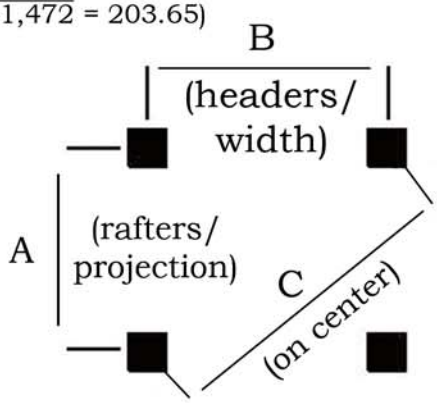
Section 1: The Posts

A. Preparation for Post Installation

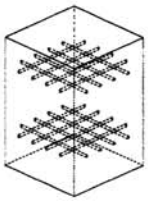
The post layout below is a suggestion for squaring your posts: other methods can be used to get the same results. The formula for squaring post is $A^2 + B^2 = C^2$

(Ex: $144^2 + 144^2 = 20{,}736$, $20{,}736 + 20{,}736 = 41{,}472$, $\sqrt{41{,}472} = 203.65$)

Pergola Size	(A) Rafter 2x6 (projection)	(B) Header 2x8 (width)	Number of posts	(C) Diagonal in inches (approx.)
12x12	144"	144"	4	203.65"
14x14	168"	168"	4	237.63"
16x16	192"	192"	4	271.53"



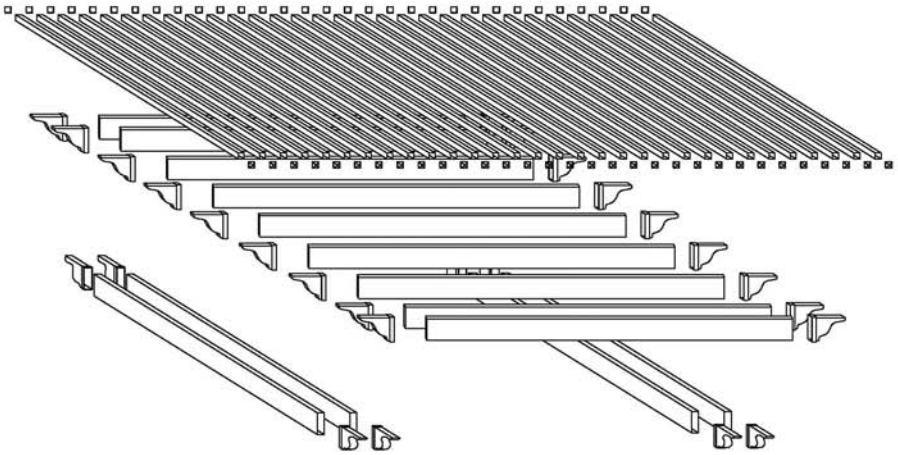
CHOOSE CONCRETE MASS FROM CHART BELOW BASED ON WIND SPEED :



Wind Speed	Mass cu ft	Depth	Length & Width
140MPH	7.2	2'	1'-10.75" SQUARE
		2'-6"	1'-8.25" SQUARE
		3'	1'-6.5" SQUARE
120MPH	5	2'	1'-7" SQUARE
		2'-6"	1'-5" SQUARE
		3'	1'-3.5" SQUARE
100MPH	3.6	2'	1'-4" SQUARE
		2'-6"	1'-2.5" SQUARE
		3'	1'-1.25" SQUARE
80MPH	2.5	2'	1'-1.5" SQUARE
		2'-6"	1'-0" SQUARE
		3'	11" SQUARE

CONCRETE SHALL BE A MINIMUM OF 3000PSI COMPRESSIVE STRENGTH WITH 2 MATS OF GRADE 60, #4 REINFORCING STEEL, 6" CENTER TO CENTER, E-W

GENERALLY SYSTEM MAY BE MOUNTED ON AN EXISTING CONCRETE SLAB, HAVE SLAB EVALUATED FOR STRUCTURAL INTEGRITY.



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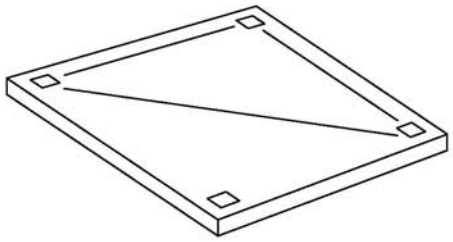
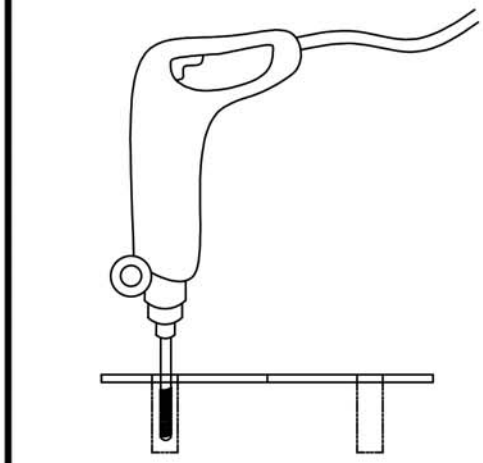
Post Set Up

1



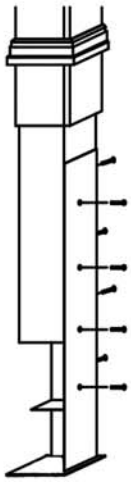
Lay out and mark the location of the posts according to the pergola size.

2



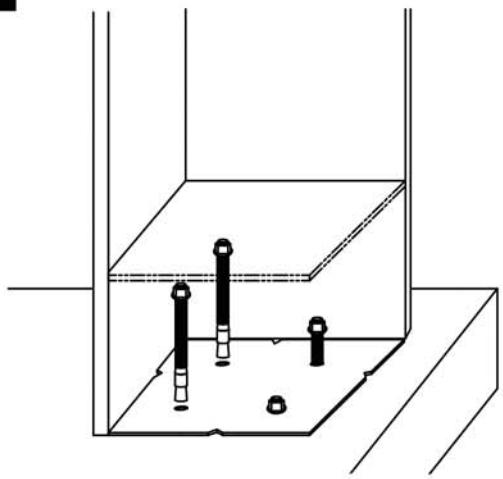
Place, square and trace each concrete post mount. (L) Pre-drill concrete mount holes with hammer drill at 4 1/2" depth with 3/8" masonary bit.
Do not rush.

3



Line up the wood post with the concrete post mount (L) and pre-drill the holes of the concrete mount into the wood. Install the #14 x 2" wood screws into the pre-drilled holes.

4



Place wedge anchors(B)into each hole and tap into concrete leaving 1" above the concrete. Place concrete post mount (L) over the installed anchors and install washer and nut to each anchor. Level and tighten with 9/16" socket.
Do not over tighten.

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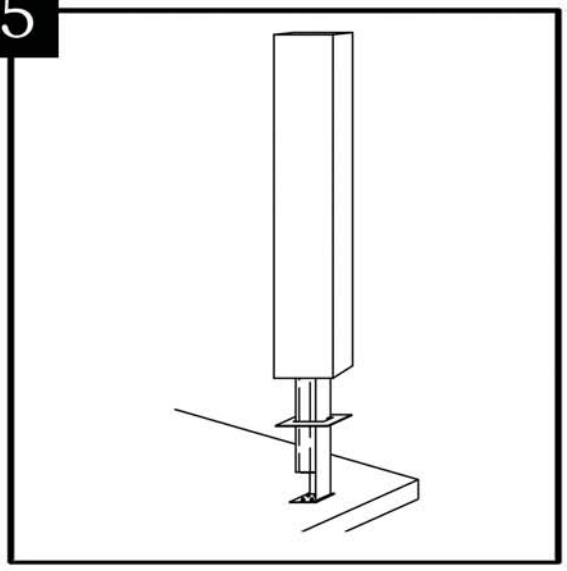
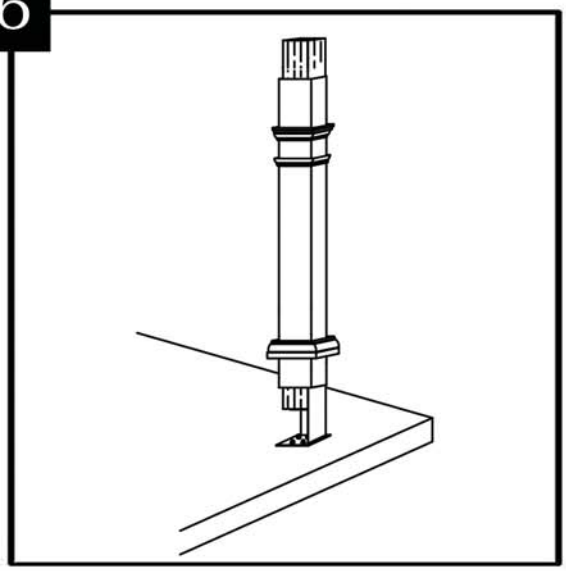
Section 2: Vinyl Sleeve Installation

5



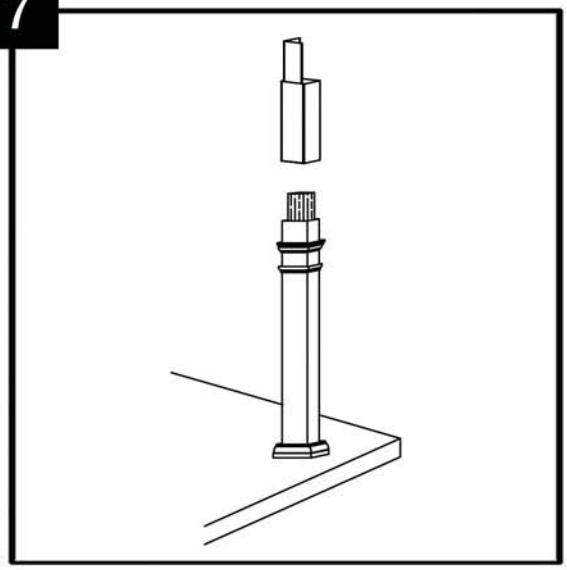
Slide the 8" interior adapter (R) over the 4"x4" wood post (P) and fasten with #10 x 1" self-tapping screws.(E) Slide the 8" post (O) over the wood and adapter.

6



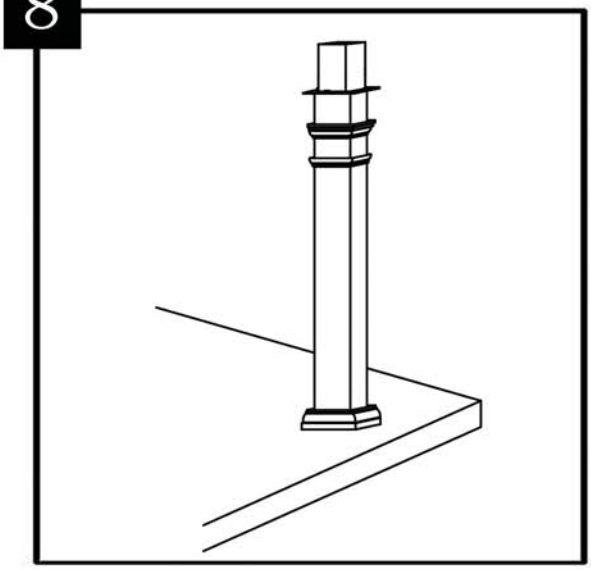
Slide the 8" square base and collar kit (S) over the post sleeve.

7



Slide the 4x4x24 sleeve (M) and spacer (N) together (spacer between the wood and vinyl post) over the remaining portion of the wood post. Hammer down post sleeve and spacer until 18" is above the post.

8



Slide the 8" straight top cap (Q) over the 4" post sleeve and spacer into the 8" post. Secure the base and collar to the post with #10 x 2 1/2" screws(A) and hinged screw caps. (J)

***Note** - The 4" x 4" wood post will need to be cut down according to the ground level it is installed on. Make sure to leave at least 18" above the 8" straight top cap or wait until step 18 to cut down.

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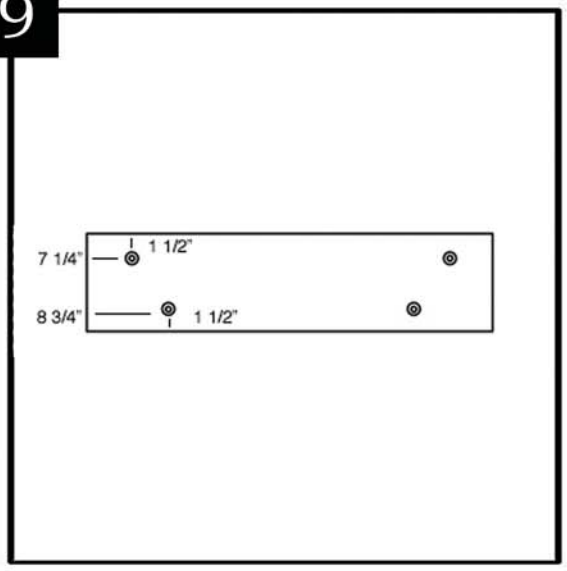
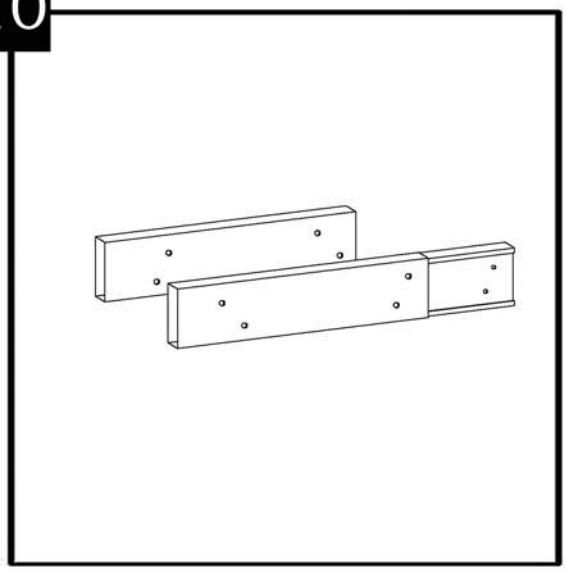
Section 3: Header Prep & Installation

9



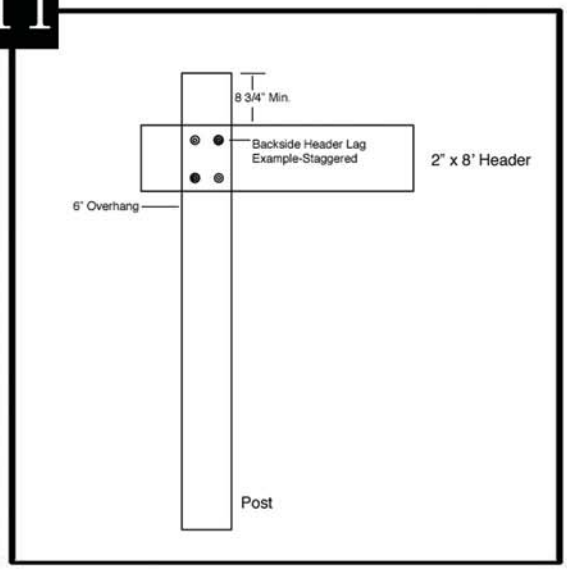
Mark the holes for the lag bolts on the 2" x 8" header.(V) Do this on both the left and right side.

10



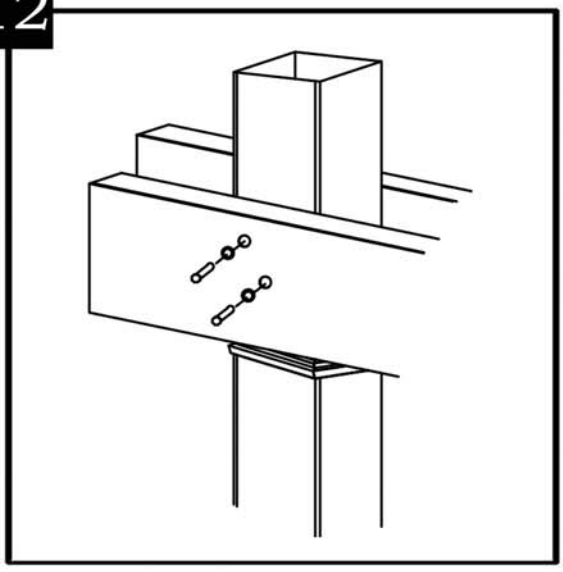
Slide aluminum out of the way. Pre drill each mark through the 1st layer of the header with a 1" wing-tip bit. Slide aluminum back in place and use the 1" hole as a guide to drill through aluminum and backside of header with a 5/16" drill bit.

11



Position header next to the post on the width length. Make sure there is at least 6" of overhang from the end of the header to the 4" post sleeve. Use a 3/16" bit to drill through the previously drilled holes of the header into the 4" post and wood.

12



Install 5/16" x 4" lag bolts (C) and washers (G) through the vinyl and aluminum into the wood post. Tighten with 1/2" socket.

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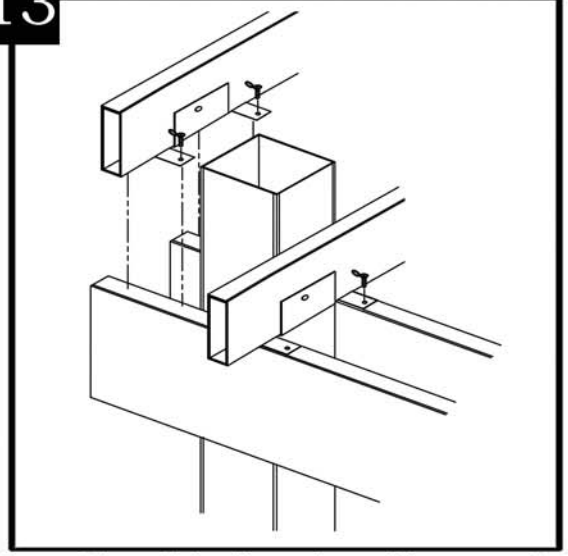
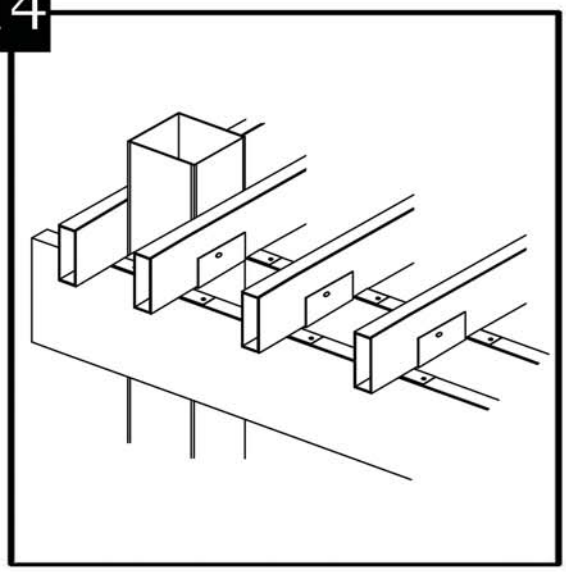
Section 4: Rafter Installation

13



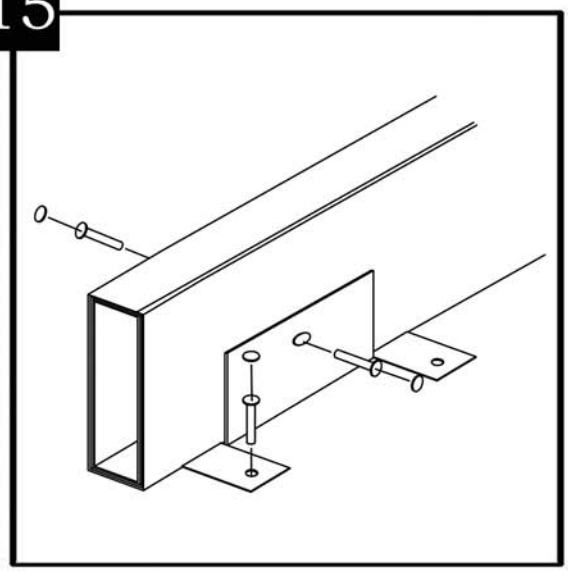
Set and install inside and outside post rafters (T) first. Your measurment is appoximately 4" from the end of the rafter to the upright of the double beam rafter support bracket. (Y) Secure the rafters and the brackets to the headers using #10 x 1" (E) screws and hinged screw caps (J).

14



Position the rafters approximately 22-24" on center. Do not attach until you have spaced the rafters first. If you modify the projection or width these measurements will change.

15



We recommand placing the remaining rafters in the double beam rafter support brackets and space them equally before securing the rafter brackets to the headers.

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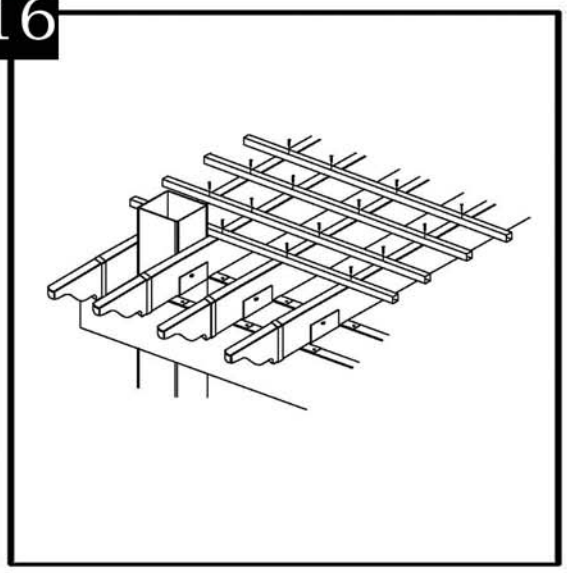
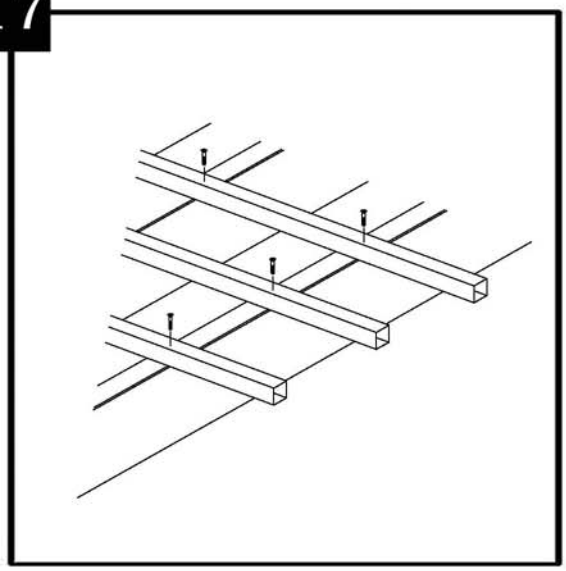
Section 5: Purlin Installation

16

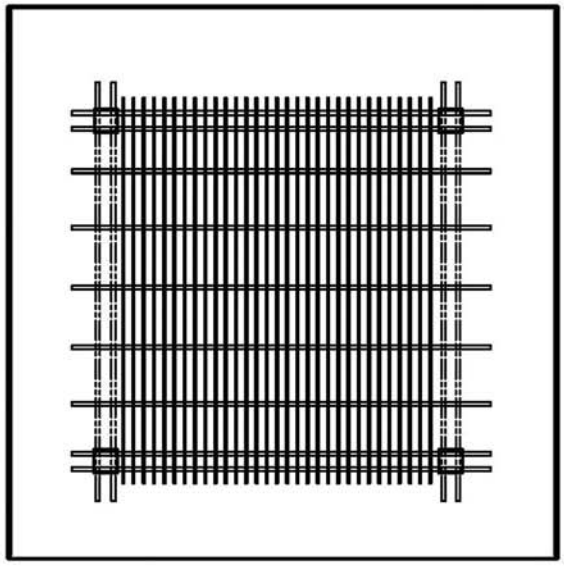


Place the purlins (U) on top of the pergola and space them evenly. The overhang should be the same on both sides.

17



Once properly positoned, use the #10 x 2.5" self tapping screws (A) and hinged screw caps (J) to secure the purlins to the rafters. **Do not** over tighten the screws as this will cause dents in the purlin.



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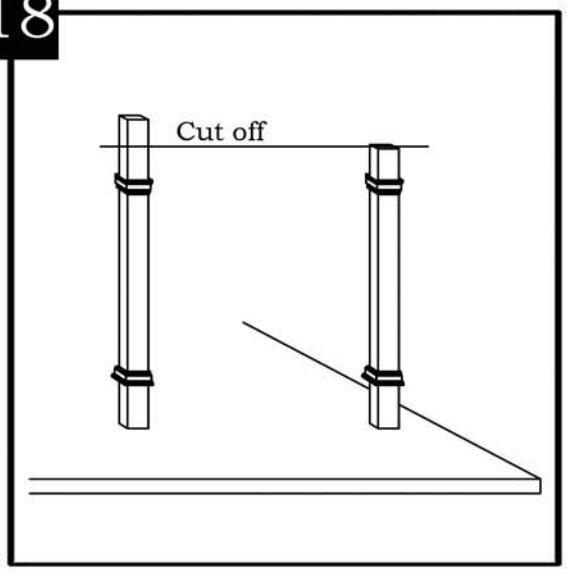
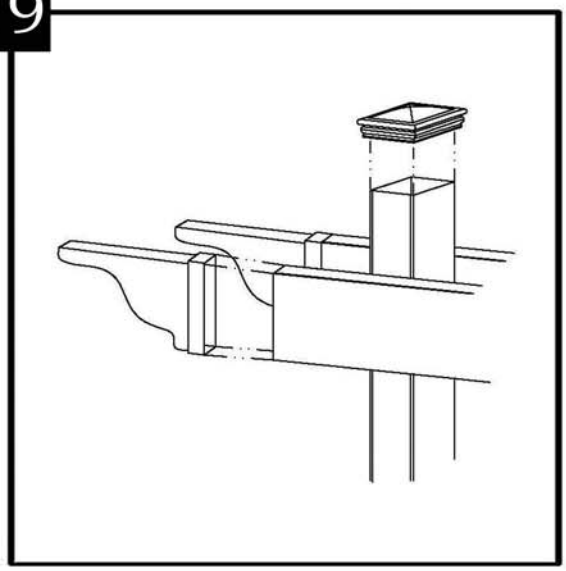
Section 6: Finish Work

18

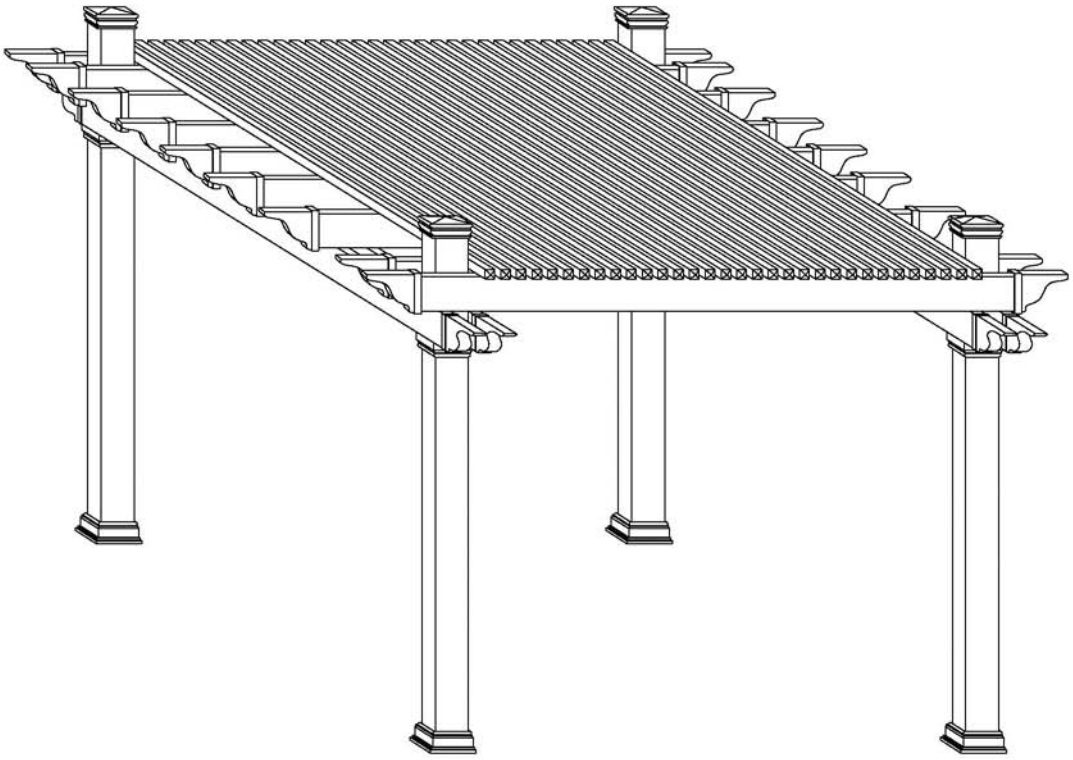


If needed, trim off any excess post sleeve. There must be at least 2" for the cap to fit correctly.

19



Install 1" hole plugs (H) in the headers. Place and secure the 4" post caps (K), decorative ends (W,X) and purlin caps (Z) with glue.(I)



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